

# California Department of Forestry and Fire Protection



## **Madera-Mariposa-Merced Unit Fire Management Plan**

**2004**

**Signature Page:**

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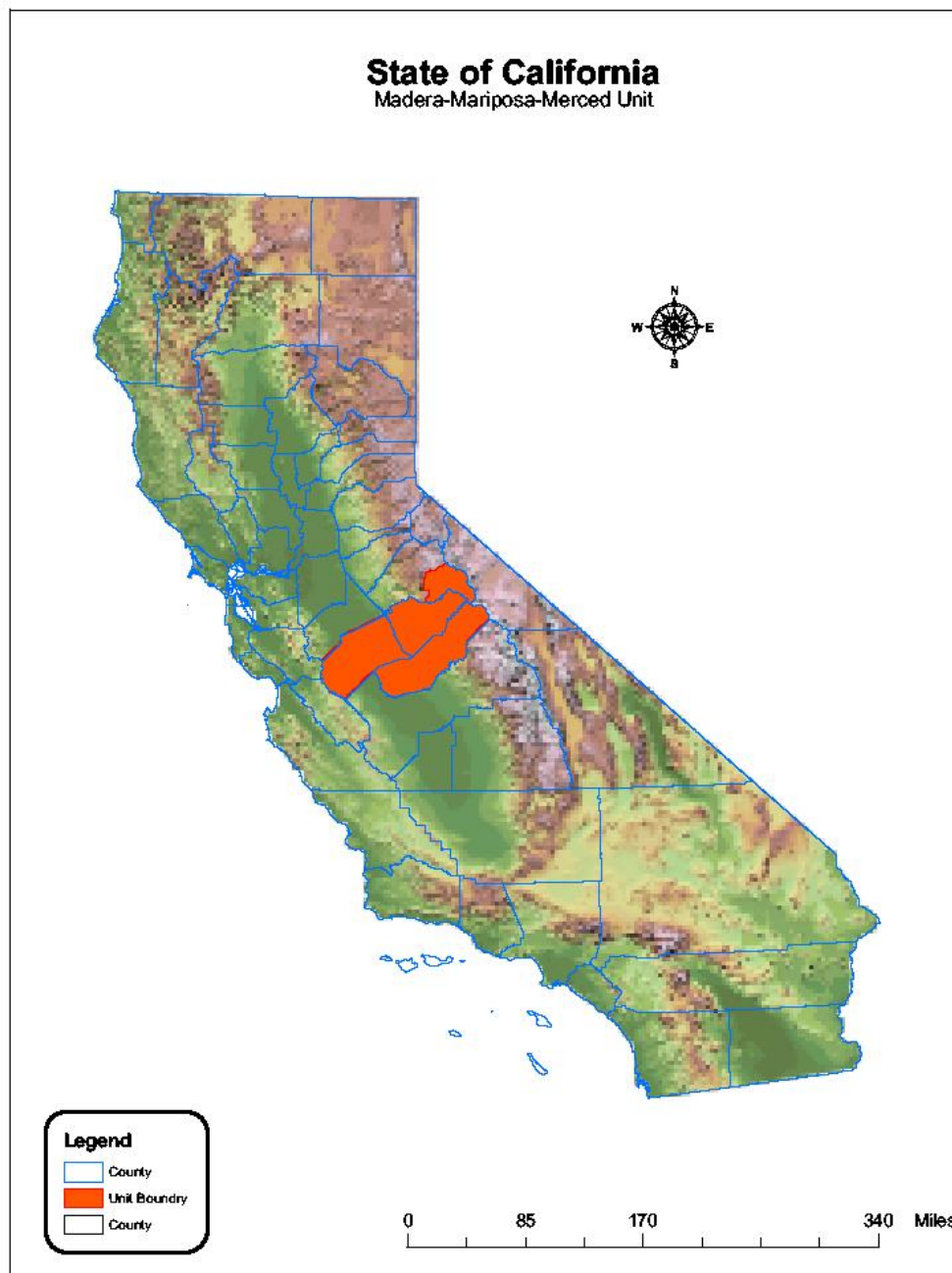
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**Figure 1**

## **Executive Summary**

Fuel reduction projects have taken a back seat to fire suppression and public education programs. Constraints placed on the agencies in the way of administering the funding sources have hampered the execution of these projects. Lengthy and sometimes costly environmental impact reports, staffing levels for cooperating agencies CDF budget restraints, and complex cooperative fire protection contracts have also contributed to extended delays in the actual implementation of pre-fire projects.

The year has seen an increase in public awareness of fire prevention. The need for homeowner fuel reduction has continued to be emphasized through the efforts of the Mariposa Fire Safe Council, the Eastern Madera Fire Safe Council, the South West Inter-Face Project Team (SWIFT) and Madera-Mariposa-Merced Unit's (MMU) fire prevention bureau. Every year an educational insert is included in the local newspapers, called "Living with Fire" to educate the public of the continuing threat of wildfire to our local communities. The Fire Safe Councils, CDF, and the Sierra National Forest (SNF) regularly provide presentations to communities at risk to wildfire. During these presentations the public is provided with information on how to reduce the threat to their communities on an individual basis.

The South West Inter-Face Team (SWIFT) is a group of agencies working together to reduce the threat of loss to life, property and natural resources in the southern Tuolumne & northern Mariposa county in the Urban Wildland Interface. There are approximately 132,000 acres located in the SWIFT area to be mitigated for the wildland fire problem within the project area. To date over 40 miles of fuel break construction and almost 13,000 acres of fuel treatment activities have been completed in the project area.

Three Fire Safe Councils have developed into an organization that is actively involved in educating the public in wildfire preparedness and fuel reduction projects. Two of the three Fire Safe Councils have become autonomous. They have received numerous grants and have become self-sustaining. MMU's role with the FSC's is in an advisory capacity only. The Unit's PFE works closely with the FSC's to jointly implement the Unit's Fire Plan. Both FSC's and the Rancheria have obtained their non-profit status and have received well over \$970,000 through the National Fire Plan for education, planning and actual fuel reduction projects.

Cooperative planning continues with the Sierra National Forest, Bass Lake District, to construct fuel breaks along Nation Forest lands which intersect or would otherwise enhance the SRA fuel breaks for continuity. In addition CDF-MMU is working on a collaborative community plan with the SNF, county governments, Fire Safe councils, local tribes, Yosemite National Park (YNP), and the Bureau of Land Management (BLM) to support the National Healthy Forest Restoration ACT of 2003.

Pacific Gas & Electric (PG&E) continues to integrate their power line clearance projects with our fuel reduction projects.

Other selected fuel reduction projects are being planned in and around the target areas of the unit which will be discussed in depth later in the plan.

MMU is committed to the implementation of the Unit's fire plan and will attempt to continue to utilize what resources are available to accomplish the goals and objectives of the Fire Plan.

# **I. Stakeholders**

Stakeholders are defined as any person, agency or organization with a particular interest - a stake - in fire safety and protection of assets from wildfires. The Madera-Mariposa-Merced Unit has made a considerable attempt at involving stakeholders and many of their interests in the planning of the MMU Fire Plan. The process of identifying stakeholders and their interests is an ongoing process and will be evaluated continuously through the evolution of future pre-fire management plans. It is the goal of the Madera-Mariposa-Merced Unit to participate with as many stakeholders as is possible and to continually update planning efforts involving stakeholder input.

The primary stakeholder groups within MMU involve two fire safe councils, The Eastern Madera County Fire Safe Council and the Mariposa County Fire Safe Council. Both are instrumental in bringing a conglomeration of stakeholders to “The table”. The councils shed light on many concerns within the communities and expose information relating to the effectiveness of MMU’s fire safe efforts. The North Fork Mono Rancheria has developed a fire safe group to address the needs and education of its citizens to fire safety. The Rancheria works along with the Eastern Madera County Fire Safe Council to reduce fuels on tribal and trust lands in the North Fork area. Other stakeholders contributing to the Unit’s Fire Plan on a regular basis include: The Sierra National Forest; Bass Lake District, Mariposa County Fire Department; Madera County Fire Department; and the Bureau of Land Management.

The Unit is able to respond and adapt to activities that address many of the concerns from the different stakeholders. Through the Fire Safe Councils’ involvement with the local communities, the cooperating agencies have been able to develop prefire and fire prevention projects that otherwise may never have developed. MMU, in cooperation with the Fire Safe Councils, have recently experienced fire safe successes some of which some will be mentioned later in this fire plan. This list is dynamic, and includes the stakeholders at one point in time. Essentially, it is a snapshot during a motion picture.

The key issues, as a consensus, are to reduce fuels in and around communities at risk to wildfire and educate the public about living with fire. There is a collaborating effort among all the stakeholders to accomplish this task. There are a number of committees designed to address the issues that have developed strategies and long term solutions. One example of this is the Southwest Interface Team (SWIFT) which is addressing fuel reduction projects and pre fire tactics in the northern portions of the Mariposa County, the southern portion of Tuolumne County, and the Stanislaus National Forest.

The Mariposa County Fire Safe Council has a number of fuel reduction projects funded through grants, for fuel reduction and education projects in Mariposa County. Madera County along with CDF, Mariposa County and the Sierra NF are working on a project that involves the Healthy Forest Restoration Act of 2003 to reduce fuels in and around “Communities at Risk”.



## II. General Description of Current Fire Situation

The primary goal of wildland fire protection in MMU is to safeguard, from the effects of wildfire, the wide range of assets found within the unit. These assets at risk are both public and private that the wildland fire protection system was created and funded to protect. The following have been identified as assets at risk from wildfires: timber, watershed, wildlife, unique scenic and recreation areas, range, wildlife, air quality, structures and people.

### Assets at Risk

Asset at Risk	Public Issue Category	Location and ranking methodology
Hydroelectric power	Public welfare	1) Watersheds that feed run of the river power plants, ranked based on plant capacity; 2) cells adjacent to reservoir based plants (Low rank); and 3) cells containing canals and flumes (High rank)
Fire-flood watersheds	Public safety Public welfare	Watersheds with a history of problems or proper conditions for future problems (South Coastal Plain, field/stakeholder input), ranked based on affected downstream population
Soil erosion	Environment	Watersheds ranked based on erosion potential
Water storage	Public welfare	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	Public health	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Public welfare	Four mile view shed around Scenic Highways and 1/4 mile view shed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Public welfare	Timberlands ranked based on value/susceptibility to damage
Range	Public welfare	Rangeland ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Public health Environment Public welfare	Potential damages to health, materials, vegetation, and visibility; ranking based on vegetation type and air basin
Historic buildings	Public welfare	Historic buildings ranked based on fire susceptibility
Recreation	Public welfare	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility

Structures	Public safety Public welfare	Ranking based on housing density and fire susceptibility
Non-game wildlife	Environment Public welfare	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Game wildlife	Public welfare Environment	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Infrastructure	Public safety Public welfare	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines)
Ecosystem Health	Environment	Ranking based vegetation type/fuel characteristics

**Table 1 Assets at Risk**

*The assets at risk have been evaluated to the 450 acre scale within the unit and validated by unit personnel to greater detail. The Department for purposes of manageability has designated the 450 acre scale. The 450 acre cells have been designated as Quad 81<sup>st</sup>. This designation is based on the sectioning of a USGS 7.5 minute quadrangle map broken down into a 9x9 grid pattern; the result is squares of 450 acres. Fire plan assessments have been made at the q81st level; for instance, each Q81st in MMU has a ranking applied to it for LOS, AAR, fuel hazards, etc.*

Fire protection resources are limited, primarily by budget constraints. Therefore, these resources should be allocated, in part, based on the magnitude of the assets. The assets have been ranked, high, medium and low, as to their susceptibility to wildfire. (For more information regarding the evaluation of asset susceptibility, refer to the California Fire Plan.) The ranking is scaled to the Q81st and transferred to GIS maps. The map overlays have been evaluated by unit staff through a series of meetings, through which, an identification of the areas with the highest combined asset values and fire risk has been targeted for pre-fire management activities (See Target Area Map). Many factors are involved in target area identification, including political climate of the region and suppression cost reductions.

The process of explicitly enumerating assets at risk also helps to identify who benefits from those assets. It is a premise of the California Fire Plan, on which this plan is structured that those who benefit from the protection of an asset should pay for that protection. Throughout MMU many cooperative pre-fire management projects have been established and through the active role of MMU staff in the planning phases of these projects, Unit resource investment has continuously been evaluated. MMU has been relatively successful in apportioning its resources based on public versus private benefits. A primary reason for MMU's effective cost apportionment efforts is evident through the Department's Vegetation Management Program (VMP), where a cost apportionment formula is built in to the contract. VMP is the Unit's primary tool for pre-fire management projects and by default, the investment by Unit staff is relative to the return. Unfortunately, budget reductions have all but eliminated VMP as a tool for fuel reduction in MMU.

## Ignition Workload Assessment (Level of Service)

The Level of Service (LOS) rating is a ratio of successful fire suppression efforts to the total fire starts, a method to measure initial attack success and failure rates throughout the Unit and is based on fire sizes. The LOS uses a Geographic Information System (GIS) that overlays a 10 year history of wildfires onto a map and derives the average annual number of fires by size, severity of burning and assets lost. This data provides a LOS rating, in terms of a success and failure calculation.

Success Rate =

Annual number of fires that were small and extinguished by initial attack

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Total number of fires

\*100 = Success rate in percent

The result is an initial attack success rate in percentage of fires by vegetation type and area. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred and where initial attack resources are sufficient to control wildfires.

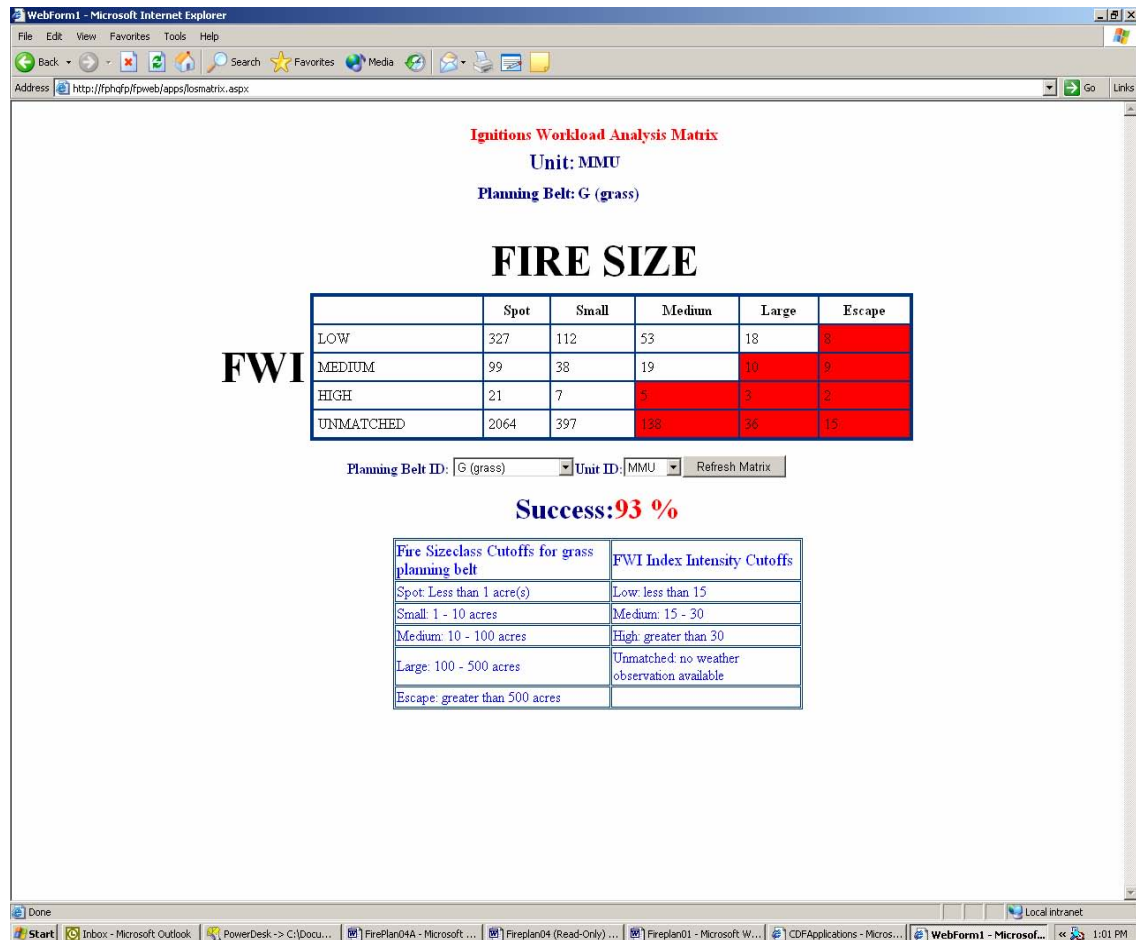
A matrix is used to define and display successful initial attacks in this framework. The matrix axes define fire sizes and intensities. The body of the matrix contains the fire activity workload for the fire management analysis zone.

The general matrix has five columns for fires of different sizes and three rows for different intensity levels. The actual size classes and intensity levels are defined for regions of similar vegetation. The dark shaded portion of the matrix indicates fires that would be expected to exceed budget (and some emergency fund) protection. The lightly shaded portion indicates successful initial attack suppression; fires that are normally contained within allowable suppression costs.

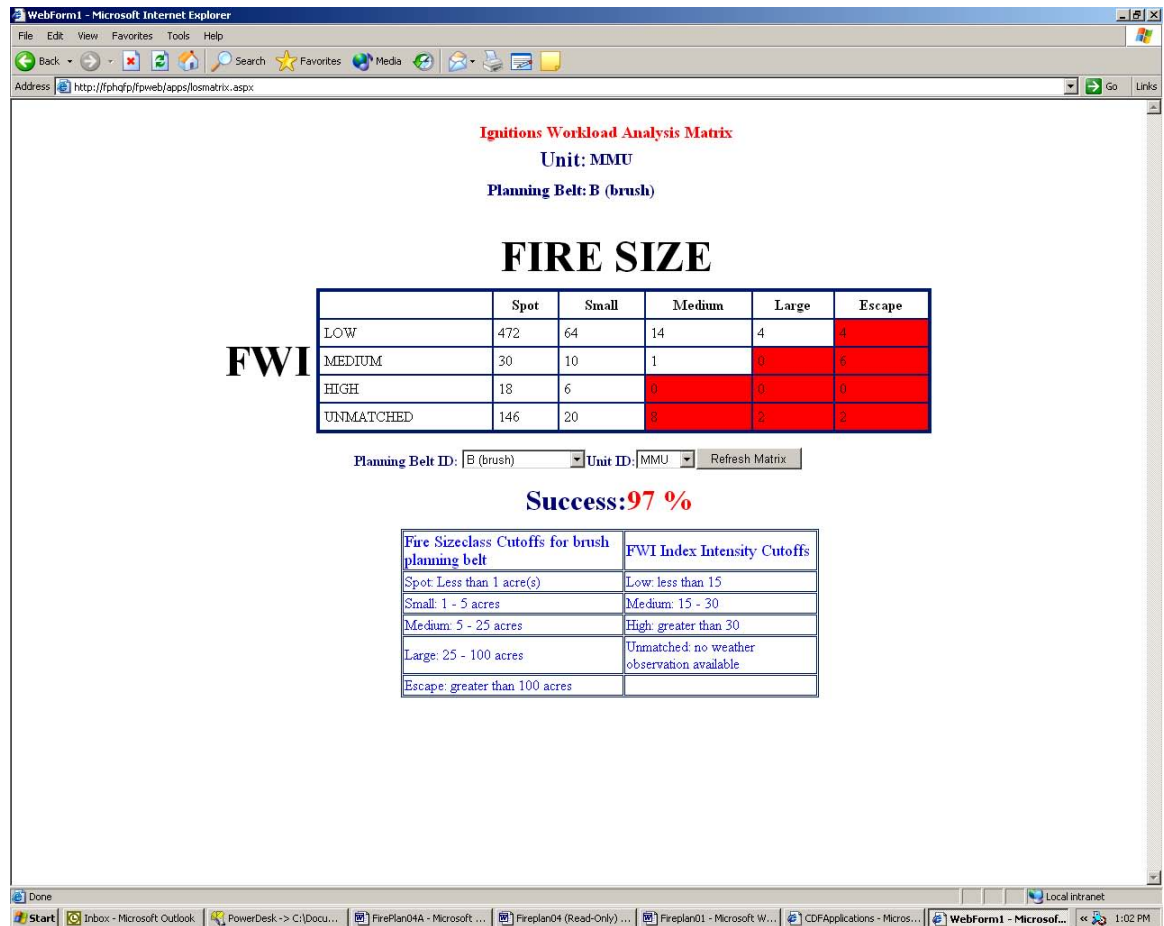
In this matrix, the lightly shaded area represents fires that are successfully attacked and the dark shaded area represents the unsuccessful initial attacks. (Figure 4) This designation of successful matrix cells would remain the same for planning belts.

*Planning Belts are areas consisting of broadly similar vegetation types. These zones have similar fire behavior characteristics that impact fire suppression activities and are based on the Fire Behavior Prediction System fuel modeling correlation.*

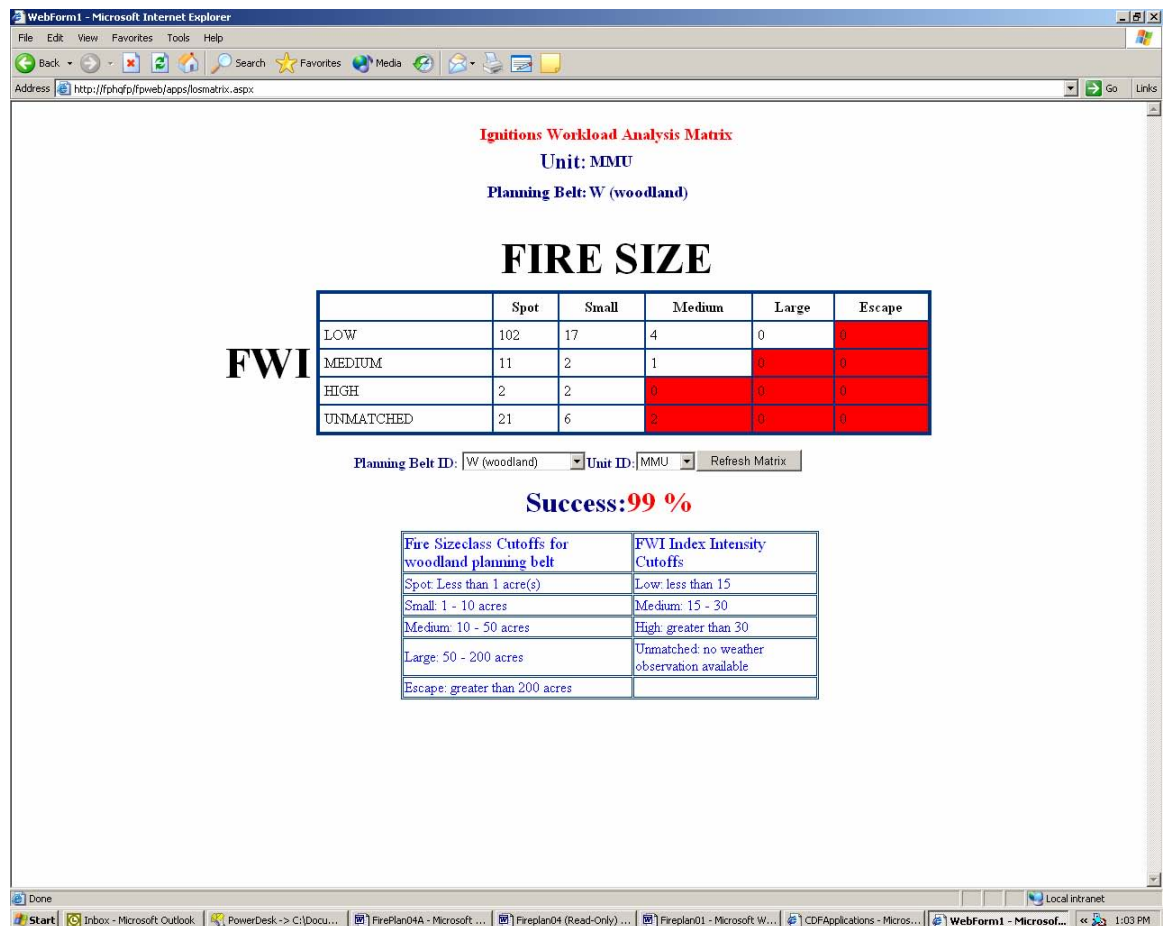
*MMU has four planning belt types; Grass, Brush, Conifer and Woodland.*



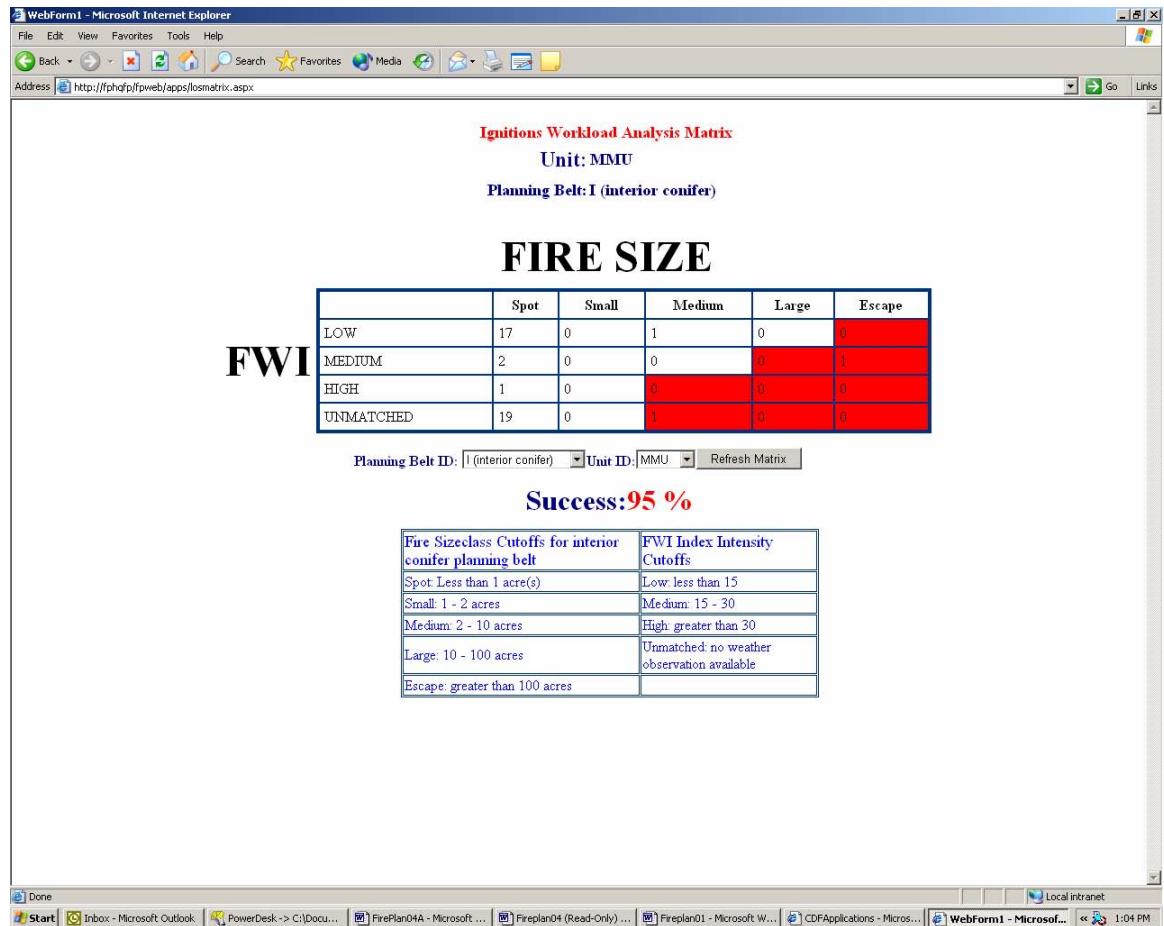
**Chart 1**  
**Grass**



**Chart 2**  
**Brush**



**Chart 3**  
**Woodland**



**Chart 4**  
**Interior Conifer**



## Fuels

Fuel, in the context of wildland fire, refers to all combustible material available to burn on an area of land. Grass, brush and timber are the most common fuels found in our mountain ecosystem. Each fuel has its own burning characteristics based on several inherent factors. These factors include its moisture content, volume, arrangement and the plants genetic make up. All of these contribute to how a fire spreads, its intensity, and ultimately, its threat to assets.

Fuel loading is measured in tons per acre. Grass is considered a light fuel with Approximately  $\frac{3}{4}$  tons per acre fuel loading. On the other end of the spectrum, thick brush, a heavy fuel, can have a volume of over 21 tons per acre. The intensity of the fire is directly related to fuel loading. Grass burns rapidly with a short period of intense, maximum heat output; brush on the other hand has a long sustained high heat output making it more difficult to control. Therefore, it is necessary to identify areas containing the more hazardous fuels in order to better manage the hazardous conditions by high fuel loads.

## Hazardous Fuels Assessment

Arrangement is critical in wildland fire behavior for it dictates how a fire spreads. Un-compacted fuels, such as grass, spread fire rapidly since more of its surface can be heated at one time. Compacted fuels such as pine litter burn slower because heat and air only reaches the top of the fuel. Vertical arrangement refers to a fuel's ability to spread upward into treetops. These are called *ladder* fuels and are influential factors on fire spread. The ignition of ladder fuels allows the fire to spread from the ground into the treetops. *Crown* or *canopy* refers to the tops of trees and is very important in stands of burning timber. A fire once introduced by ladder fuels to the tops of dry conifers can spread as rapidly as a grass fire from treetop to treetop.

In an attempt to predict fire spread, the U.S. Forest Service has developed 13 fuel models that categorize fuels by their burn characteristics (Table 5). Four groups are used to classify fuels: grass, brush, timber and logging slash. The fuel model characteristics have been utilized to determine planning belts in the unit. The following is a brief description of the fuel models commonly found in CDF's wildland protection area of Madera, Mariposa and Merced Counties:

**Model 1:** This model is used for dry grass with an average depth of 1 foot and a fuel loading of .75 tons per acre. Fires in fuel model 1 burn rapidly with flame length averages of 4 feet. This is probably the most common model in our area and it reflects nearly all of the grasslands found in the foothills below an elevation of approximately 1000 feet, including the west side of Merced County.

**Model 2:** Like fuel model 1, fires in fuel model 2 spreads primarily in dry grass, but with shrubs, pine or oak stands covering between one third and two thirds of the area. The material from these plants contributes to the fire intensity. Four tons of fuel is found per acre and the fuel bed depth is 1 foot. Fires in fuel model 2 burns slower but more intensely than fuel model 1. Indian Lakes in Madera County, Highway 140 just north of Catheys Valley, and the top of Pacheco Pass are examples of this fuel type.

**Model 4:** This is a brush model and is characterized by stands of mature brush, 6 feet or more in height with more than 16 tons of fuel per acre. Fires in this fuel model burn intensely (19 foot flame lengths) and spread relatively quickly. This fuel type is found in some areas of the Merced River Canyon and in the Coulterville-Greeley Hill area.

**Model 5:** Litter cast by shrubs in the under story carries fire in this brush model. The fires do not burn intensely (4 foot flame lengths), nor rapidly since the young shrubs are green and the foliage does not burn. This fuel type is common at about the 2000 to 3000 feet elevation range of the Sierra, especially in the early months of summer while moisture is abundant.

**Model 6:** Unlike model 5, fires in this model will burn in the foliage of standing vegetation, but only when wind speeds are greater than 8 mph. Fires burn with an average flame length of 6 feet and spread at a rate of 2,112 feet/hour. Interior live oak, young chamise and manzanita are all associated with this fuel model. In many instances a fuel model 5 will evolve into this model by the latter part of summer.

**Model 8:** This model reflects slow burning, low intensity fires burning in the leaf or needle litter under a conifer or hardwood canopy. These fires do not pose a threat unless low fuel moisture or high winds allow the fire to spread into the foliage. This model is found locally in areas treated for fuel reduction. It represents the ideal fire behavior to maintain low fuel buildups.

**Model 9:** Fires in this model also burn in needle or leaf fall under a conifer or hardwood canopy, but at a faster rate than fuel model 8 and more intensely. Concentrations of heavier dead material add to the possibility of the fire spreading to the crowns of trees. This model is found in very limited areas under timber stands which have been treated for fuel reduction, or have seen low intensity fires over the last decade.

**Model 10:** Fires in this timber model burn with greater intensity (4.8 feet flame lengths) due to the quantities of dead and down fuel accumulations in the form of large limbs and fallen trees (12 tons/acre) than the other timber models. Fire burns at a moderate rate but “torching” of individual trees is common and can cause embers to start fires ahead of the main fire. Crown fires are also a threat in this fuel type. In dry conditions, or with high winds, fires in fuel model 10 can be very difficult to control. This model is found in many areas of Madera and Mariposa Counties where stands of ponderosa pines or other conifers are present.

The local distribution of the fuel models is illustrated in Table 2. It can be seen that the density of combustible material increases with elevation. Models 1 and 2 (grass) are found at lower elevations, progressing into brush and from brush to timber at the National Forest boundary. Local conditions also affect distribution. North facing slopes tend to get slightly more rainfall and less sun, thus heavier vegetation grows on the north side of the mountain. Soil conditions can also preclude the growth of heavy fuels allowing only hardier species such as chamise to sprout. MMU has a wide variety of fuel types requiring a variety of fuel management prescriptions.

Fuel Model #	Fuel bed depth (feet)	Tons per acre (live)	Tons per Acre (dead)	Flame Length (feet)	Spread Rate (feet/hour)	Comments
1	1	0	.74	4	5195	Dry grass. Common in areas under 1000' elevation.
2	1	.5	4	6	2331	Dry grass with 1/3 to 2/3 brush or tree canopy. Very common above 1000'.
3	2.5	2.5	3.01	12	6926	Grass model, not found locally.
4	6	5.01	16.03	19	4995	Thick brush with heavy dead component.
5	2	2	3.5	4	1199	Young or green brush with fire in the litter only.
6	2.5	2.5	6	6	2131	Mature or dry brush with foliage that will burn when exposed to wind.
7	2.5	2.5	4.87	5	1332	Brush model, not found locally.
8	.2	.2	5	1	107	Timber or hardwood with fire burning in light litter underneath.
9	.2	.2	3.48	2.6	499	Timber with fire in slightly heavier litter than model 8
10	1	1	12.02	4.8	526	Timber with heavy dead material underneath.
11	1	1	11.52	3.5	400	Light logging slash from a partial thinning operation
12	2.3	2.3	34.57	8	866	Moderate logging slash
13	3	3	58.1	10.5	899	Heavy logging slash

**Table 2 National Wildfire Coordinating Group Fuel Models**

The next phase of determining fuel hazard ratings for the MMU involves the combining of crown fuel characteristics and surface fuel characteristics. The method ascribes additional ladder and crown fuel indices to surface fuels on a given area. If the vegetation data provide sufficient structural detail, the method imputes these additional indices from those data. If the vegetation data lack structural detail, the method imputes indices based on the fuel model. In MMU the majority of indices were based on the FPBS fuel models.

The potential fire behavior drives the hazard ranking. A rank is attributed to each Q81st in SRA within the unit. The ranking method portrays hazard ratings as moderate, high or very high. The final map displaying the fuel hazard ranks for CDF's Direct Protection Area (DPA) in MMU is used as another factor for determining pre-fire management target areas, fire size potentials and information for stakeholders with interests in ecosystem management, fuels management, and pre-fire management.

Knowledge of fire behavior in a given fuel type is essential for designing a defense plan against wildfire. Fires in grass burn rapidly but can be stopped by a roadway or plowed fire breaks. Fires in brush often burn with an intensity that prevents fire crews from safely applying water to the flame front. Timber fires can ignite new fires (called spot fires) miles ahead of the main blaze, making control efforts nearly useless. Only wide scale pre-fire management programs can prevent a potential wildfire catastrophe.

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## Fire History

Wildfire history is a significant factor of the pre-fire management planning process. The fire plan assessment framework incorporates detailed information for determining the most beneficial locations for pre-fire management projects, an idea of the level of service on SRA for the unit and various assets at risk information. Fire history is a piece of the puzzle that allows unit personnel to learn from our past and make an attempt to prepare for future fire behavior. Having knowledge of fire history provides an account of historic fire travel in a particular area. Armed with knowledge of historic fire spreads fire suppression forces are better equipped to predict fire spread potentials. Identifying where the largest and most damaging fires have occurred is a necessary step in preparing for future wildfire. The most significant aspect of fire history in MMU is that personnel are able to compare the relationship between identified assets at risk and the historic burning patterns of wildfire which, allows for a more informed decision making processes when preparing fire planning documents and procedures.

Figure 6 displays wildfire history on SRA in MMU between 1978 and 2003. The fires shown are 300 acres and larger until 1998. Fires recorded from 1999 through 2001 are 100 acres and larger, and from 2002 until present fires 50 acres or greater are now documented. The map display signifies patterns that are used in pre-fire planning processes.

## **Fire Weather History**

Wildfire behavior is influenced by three factors known as the fire environment. The fire environment involves environmental factors: fuel, weather and topography. Of these factors, weather is the most influential factor on fire behavior. Identifying patterns and locations of extreme wildfire behavior provides yet another tool for pre-fire management planners to use when attempting to reduce the costs and losses of wildfire.

In MMU the severe fire weather assessment has been calculated at the Q81st level through the collection of data from weather stations throughout the unit. The average number of days that each Q81st experiences severe fire weather has been calculated and displayed on a GIS map. This map is utilized in the planning process by overlaying the map on fire history maps, fire ignition maps and level of service maps. Furthermore, fire weather history has been incorporated into the level of service ratings for MMU which provides a more accurate depiction of the wildfire protection level of service within the unit during severe weather conditions (See appendix).

### **III. Vegetation Management**

Attainment of the fuels reduction goals of the MMU Fire Plan will require on-the-ground effort on the Department's part. Use of CDF Fire Crews (CYA), personnel and equipment will likely be necessary in many areas where stakeholders do not have the finances or resources to do an effective job individually or as a group. The Vegetation Management Program (VMP) is currently the primary vehicle by which CDF resources may be used on privately owned lands. In place since 1981, the program has been an effective fuels reduction / rangeland improvement tool.

VMP is a cost-share program; the State's share of a project's cost may range from zero to ninety percent. This is based on a public benefits formula - the greater benefit to the public, the greater the share of the cost of the project CDF may assume. Since by their nature, fuels reduction projects in critical areas identified in this plan will have a high public-to-private benefits ratio, the Unit's efforts will be concentrated in these areas. For example, a project in the Chowchilla River drainage that will reduce fuels around areas such as Ponderosa Basin or Lushmeadows will have a high public/private benefit ratio, so lower landowner participation is justified. Conversely, projects that are essentially range improvement burns that are not near population concentrations will require a higher degree of landowner effort and proportional costs. This is not to say that rangeland burning is of minor importance. Through this century, range improvement burns have been vital in managing wildland fuels on a landscape basis. However, increasing population in the rural areas has brought constraints such as smoke management and liability concerns. Such constraints have made the LE-7 / range improvement projects less attractive and has put VMP projects in higher demand with ranchers in the unit.

The unit currently has a variety of VMP projects in various stages of preparation;

#### **Battalion 1:**

- 1.) Adams VMP – Prescribed Fire/Fuel Modification  
800 Acres  
Delayed –Pending resources
- 2.) Old Toll VMP – Prescribed Fire/Mechanical Fuel Modification  
Acres 1700  
Delayed –Pending Resources
- 3.) Hunters Valley VMP – Prescribed Fire/Mechanical Fuel Modification  
Acres to be determined  
Delayed –Pending Resources
- 4.) Greeley Hill VMP – Prescribed Fire/Mechanical  
Acres 2000  
Delayed –Pending BLM Budget approval



**Battalion 2:**

- 1) Ponderosa Basin VMP – Shaded Fuel Break  
35 Acres  
Pile burning being conducted by staff personnel during NIRA
- 2) Von Der Ahe Estate VMP  
329 Acres  
In-process  
A cooperative project with the Mariposa RCD
- 3) Lushmeadows VMP – Fuel Reduction/Fuel Break  
350 Acres  
Project completion date – The roadway right-of-way phase of the project has been completed. The fuel break phase has been delayed pending available resources.
- 4) Long VMP – Prescribed Fire  
Acres 450  
Projected completed date 07/20/04 – Pending APCD approval and fire activity.

**Battalion 4:**

- 1.) Oakhurst Basin VMP – Fuel Break/Fuel Modification  
Acres to be determined  
In planning stage

## IV. Ignition Management

The Fire Prevention Battalion Chief has compiled statistics of fire prevention activities in MMU. The results of the compilation of statistics, is referred to as the Fire Prevention Plan which has been the annual statistical document for CDF units statewide. The Unit Pre-fire Management Plan is intended to eventually replace the traditional fire prevention plan. It has been determined that the MMU Pre-fire Management Plan will not immediately replace the existing Fire Prevention Plan. Instead, the MMU Pre-fire Management Plan will incorporate elements of the traditional prevention plan. This MMU Pre-fire Management Plan will be a baseline document for which, future pre-fire management plans will develop and expand on. During the early applications of this plan there will be an effort to implement processes such as, phasing out the fire prevention plans.

The statistics displayed in this section of the plan will be evaluated and utilized as tools in the “Action Plan” portion of the MMU Pre-fire Management Plan. Chart 1 displays the percent of fire ignitions by cause on SRA in MMU.

### Cause Analysis Summary

The subsequent description of fire ignition causes is a result of fire reporting information on SRA in MMU and represents fires for calendar year 2003. This information is essential for determining the types of fire prevention activities that are emphasized in the Unit.

**Miscellaneous:** 201 for 44%

**Undetermined:** 71 for 16%

**Vehicle:** 70 for 15%

**Debris Burning:** 40 for 9%

**Arson:** 20 for 4%

**Electric Power:** 15 for 3%

**Playing with Fire:** 10 for 2%

**Equipment Use:** 5 for 1%

<b><u>Campfires:</u></b>	5 for 1%
<b><u>Lightning:</u></b>	13 for 3%
<b><u>Smoking:</u></b>	3 for .5%
<b><u>Railroad:</u></b>	0 fires in SRA.

**Total SRA Fires 453**

## Public Resources Code 4291 LE-38 Inspection Report

A portion of the Public Resources Code 4291 (PRC4291) requires a minimum of 30' fire safe clearance surrounding all structures on SRA in California. This fire safe clearance has several benefits relating to wildfire protection. First, the clearance provides a "Defensible Space" for firefighters during structure protection activities. Additionally, the clearance reduces the potential of fire spread into the wildland should a fire burn inside of a structure. Furthermore, the clearance "buys time" and reduces fire spread from the wildland into the structure. The benefits of "defensible space", has been recognized by fire suppression forces nationwide. Thus, a significant effort has been invested in the inspection program. (Actual inspections are referred to as "LE-38 Inspections"). MMU has participated in an aggressive structure inspection program and through this fire plan the efforts may be better focused as a result of the fire plan assessment results. The subsequent figure is an account of the inspection efforts exerted by MMU personnel.

### LE-38 TOTALS AS OF DECEMBER 31, 2003

#### BATTALION 1

Total Inspections	1310
Total Violations	19
Citations	0

#### BATTALION 2

Total Inspections	948
Total Violations	0
Citations	0

#### BATTALION 3

Total Inspections	116
Total Violations	1
Citations	0

#### BATTALION 8

Total Inspections	
Total Violations	
Citations	

#### BATTALION 4

Total Inspections	2687
Total Violations	78
Citations	0

#### BATTALION 5

Total Inspections	1737
Total Violations	116
Citations	3

#### BATTALION 7

Total Inspections	81
Total Violations	6
Citations	0

**Total Inspections Performed Unit Wide = 6879**  
**Total Violations Unit Wide = 220**

## Public Resources Code 4290

The Public Resources Code 4290 (PRC4290) contains requirements pertaining to new building and driveway construction on SRA lands in California. Driveway widths, slopes, turn-around areas, and water storage requirements for firefighting forces are included in PRC 4290. MMU personnel have been tasked with inspecting the new construction within the unit, specifically Mariposa County. Madera and Merced Counties have provided personnel to conduct inspections while Mariposa County utilizes state funded positions to conduct inspections. This task is taken seriously and there has been an effort to inspect 100% of new construction projects in MMU.

	<u>2002</u>	<u>2003</u>
New Permit reviews:	297	874

The above statistics reflects Mariposa County for 2002. Both Madera and Mariposa Counties building permits are reflected for 2003. No report from Merced County.

All inspections dated 2002 were finalize in arrears for 2002. None were carried over to 2003. This should be standard practice to reflect actual statistics by calendar year.

## **V. Action Plan**

### **Goal Statement**

The goal of the MMU Fire Plan is to reduce costs and losses from wildfire within the unit. This action plan identifies the process that MMU will take in order achieve this goal. MMU staff have identified and prioritized seven target areas that will receive the emphasis of pre-fire management activities for MMU. The target areas have been identified based on criteria provided from the battalion chief and the fire plan assessment process, which will be discussed in this section.

## **Target Area Statement**

The process of selecting the target areas for pre-fire management activities in MMU involve review of assets at risk information combined with evaluating stakeholder input, fire history, staff experience, level of service data, fuel hazard ranks and severe fire weather information. Each battalion provides one target area, after which, the areas are prioritized. In January the Battalion Chiefs meet to review the unit's accomplishment within the target areas. The target areas are reviewed and re-prioritized by the Battalion Chiefs if necessary. Objectives and mitigation prescriptions are developed for each target area. The prescriptions are developed with the most significant resource investment in the highest priority areas. Due to the lack of resources, including personnel and equipment, the goals and prescriptions have been carried over from last year, and will continue this year.

## ***Target Area #1 - Battalion 4 (Priority #1)***

### **AREA DISCRIPTION:**

Target area #1 is in Battalion 4, which involves the areas of Oakhurst, Nipinnawasee, Ahwahnee and Miami Saddle. (See Figure 10) Some of the influencing factors involved in identifying this target area includes: Fire history, housing density, fuel hazard, timber values and range. Fire ignitions have traditionally, not been a problem, however, this target area is a direct exposure to fires starting in the Chowchilla River Drainage, where the Unit has had a significant fire history. Additionally, the target area is identified as having significant asset values with medium and high fuel hazard rankings; therefore efforts will emphasize exposure protection. Fuel management will be the emphasis of efforts to mitigate the wildfire hazard in the area.

### **GOAL:**

The goal of Battalion 4 is to reduce the costs and loses from wildfire within the battalion as well as within the Unit. Establish the target area that has been identified in the Unit Fire Plan as the number one priority within the battalion.

### **OBJECTIVES:**

- I. Support the local Fire Safe Fire Council and help heighten public awareness about the importance of fuel reduction in the area as it relates to assets at risk.
- II. Implement an aggressive LE-38 inspection program within the battalion.
- III. Continue to educate the public through personalized contact with fire station personnel.
- IV. Support Unit and local Fire Prevention activities with a consolidated effort from station personnel.

### **ACCOMPLISHING THE OBJECTIVES:**

- I.
  - A. Aggressively participate in stakeholder fuel management projects such as Proposition 204 grant funding for fuel management areas within the target area.
  - B. Support and assist the local Fire Safe Council within the area.
  - C. Solicit VMP projects within the battalion.



Page 2

- II.   A. Attempt to achieve 100% on LE-38 inspections in Nipinnawasee, Crooks Mountain and Road 628 in Ahwahnee.
- B. Achieve 100% LE-38 inspections on China Creek, John West Rd., Indian Springs Rd., Stillmeadow and Pierce Lakes Estates in and around Oakhurst.
- C. Achieve 100% inspections in the Sky Ranch, Yosemite Forks, Redwood Creek, Ponderosa Acres subdivisions and around the Bass Lake residential areas.
- D. When the engines at Ahwahnee and Bass Lake FFS are staffed for fire season, implement a systematic method for doing inspections on a daily basis.
- III.   A. Continue to educate the public with the new policy of year-round burning permit requirements.
- B. Utilize the Fire Prevention Public Education Materials.
- IV.   A. Utilize station personnel to assist with fire prevention activities throughout the Battalion.

## ***Target Area #2 - Battalion 2 (Priority #2)***

### **AREA DISCRIPTION:**

Target area #1 is in Battalion 2 and involves the northern portion of the Chowchilla River drainage to Ponderosa Basin and West to the Bootjack area. (See Figure 10) The influencing factors involved housing density, timber, fire history, and fuel hazard ratings. Most of MMU's large damaging fires have originated within this target area. The fires that start in this area immediately threaten high value/ high-risk exposures. The historic ignitions are difficult to manage, therefore, the emphasis of efforts will involve fuel management activities and protection of asset exposures.

### **Priority: 1     Ponderosa Basin Fuel Break Project**

This project is the Battalion's top fire mitigation project. The high residential concentration on small lots with heavy fuel loading characterizes the area. The area also has experienced a significant fire history although the developed area itself has not been burned in over fifty years.

The project calls for the creation of a shaded fuel break along the northwestern boundary of the community, a public education program and a complete PRC 4291 inspection program. The fuel break has been financed using the CDF Vegetation Management Program and grant funding. Private equipment working under contract and CDF fire crews have completed about 75% of the project, The personnel dollars required to complete the educational component's of this project were diverted away from Battalion II.

It is anticipated the Mariposa High School Grizzly Fire Department will be utilized to perform a major PRC 4291 inspection program in the area.

### **Project Goals:**

- 1) Complete the fuel break and burn residual brush piles.
- 2) Obtain 100% compliance with Public Resources Code 4291 using Mariposa Grizzly Fire Department to perform the inspection.

### **Project Needs:**

- 1) One Fire Captain is needed to be available for the project through out the next year.
- 2) A Fire Captain or Fire Apparatus Engineer will be needed to be available for two months to assist with the hazard inspection program.
- 3) A Fire Captain will be needed for approximately six months to assist with fuel the break construction.

**Priority: 2** Stockton Creek Fuels Management Project

The Stockton Creek Fuel Reduction Project is the product of a Proposition 204 (Watershed Protection Initiative) grant to reduce the fire fuel loading in the upper Stockton Creek drainage. The Mariposa County Resource Conservation District in cooperation with CDF obtained the grant in 1998. In the first to years of the project, two thousand thirty six acres were treated. The majority of the land was cleared by hand or with bulldozers and piled. For the last three years the Battalion has been burning piles created by this project. This has been done under the auspice of our existing VMP plan for the project. CDF engines and Mt. Bullion, California Youth Authority, (CYA) crews have been used for this task. To date, in excess of 800 piles have burned.

As of this writing, it is estimated that at least 175 piles still need to be burned. In addition, there are many piles that are close to power lines or standing timber to be burned. These piles will either have to be moved or left to decompose on their own.

**Project Goals:**

- 1) Burn brush piles created by the landowner's fuel reduction program.

**Project Needs:**

- 1) Three Fire Captains or Fire Apparatus Engineer with an engine will be needed for six weeks to burn piles.
- 2) Three weeks of hand crew time to assist with burning piles.

**Priority: 3** Von Der Ahe Hazard Mitigation

In 1998, a local landowner, Wilford Von Der Ahe, injected herbicide into nearly all of the oak trees on a 200+ acre parcel of land in the lower Stockton Creek drainage. His intention was to have the dead trees cut and replace them with either conifers or open, grazing land. The cutting of the dead trees never occurred and the landowner has subsequently died.

We now are faced with an accumulation of dead fuels that exceeds 7 tons per acre in a drainage below several populated areas. A public road also runs through the treated area, increasing the ignition risk. Should a fire start, it will quickly become unmanageable and threaten homes along Allred and Triangle Roads. In the interest of public safety, CDF needs to become proactive in removing these fuels.

The Von Der Ahe Estate has indicated willingness to enter into a VMP agreement with CDF to begin the removal of the trees. Unfortunately, the loss of the Unit Forester position has hindered this process. Should we be able to gain a contract, the deterioration of the oaks dictates that a dozer piling and burning will be the best tactic to employ. This

will take approximately one to two months of work for a Heavy Forestry Equipment Operator, (HFEO).

**Project Goals:**

- 1) Enter into a VMP agreement with the Von Der Ahe Estate to remove the dead fuel in the Stockton Creek drainage.
- 2) Begin piling the dead fuels for burning in the winter of 2003-2004.

**Project Needs:**

- 1) One Forester 1 personnel month to establish a VMP agreement including the environmental studies.
- 2) Two Fire Captains and one HFEO for one month to begin piling the dead fuel.

***(Priority #3)***

***Target Area #3 - Battalion 5***

**AREA DISCRIPTION:**

Target area # 3 is in Battalion 5 and comprises an area just north of the community of North Fork. This area was chosen for similar reasons to the first two. Fuel hazard, housing density, timber and range comprised the major factors. The target area has not encountered a significant amount of fire history, however, topography, fuel loading and local knowledge of MMU staff pertaining to potential fire control issues provide significant reason for identifying this area as priority area number three. Fuel reduction efforts, as a result of fire exclusion, will be emphasized. Additionally, public education will be a product of fuel management activities.

**GOAL:**

The goal of Battalion Five is to reduce costs and losses from wildfire within the Battalion as well as the Unit. Establish the target areas that have been identified in the Unit's Fire Plan as number one priorities within the Battalion.

**OBJECTIVES:**

- I. Support the local Fire Safe Council and help heighten public awareness about the importance of the fuel reduction process.
- II. Conduct an aggressive LE-38 program.
- III. Continue to support Unit and local Fire Prevention activities with a consolidated effort from station personnel.

**ACCOMPLISHING THE OBJECTIVES:**

- I.
  - A. Aggressively participate in stakeholder fuel management projects such as the Proposition 204 grant funding for fuel management areas within the target area.
  - B. Support and attend local Fire Safe Council efforts within the area.
  - C. Utilize Department Fire Prevention public education materials.
  - D. Conduct one VMP project biannually within the area.
  - E. Oversee CDF's role in the Proposition 204 projects, and assists with property inspections.

Page 2

- II.     A. Utilize engine crews to achieve 100% LE-38 inspection rate in the Cascadel Wood's sub-division area, North Fork proper, Road 274, both sides and all cross streets.
- B. Utilize engine crews to achieve a 100% LE-38 inspection rate in the Quartz Mountain and Indian Lakes sub-divisions.
- C. Utilize Volunteers-In-Prevention to assist with the LE-38 inspection Program, particularly in the Yosemite Lakes sub-division to achieve 100% inspections.
- III.    A. Utilize Volunteers-In Prevention to assist in public education school programs throughout the area.
- B. Utilize newly organized Explorer Program to assist in public education programs.
- C. Continue to emphasize involvement of engine crews in public education programs.

***(Priority #4)***

***Target Area #4 – Battalion 1***

**AREA DISCRIPTION:**

Target area #4 involves the Hunter's Valley, Greeley Hill and the Bear Valley areas. These communities are in Battalion 1. They have significant timber values, medium to high fuel hazard ranks interspersed with medium housing density and accompanied by a significant fire history.

**Goal Statement:**

Our goal statement for the New Year is even more simplified than last, continue to eliminate unwanted wildfire within the Battalion boundaries utilizing the "Battalion Fire Prevention Plan".

**YEAR IN REVIEW**

The 2002 fire season was relative quite in Battalion One, several initial attack fires were suppressed under ten acres. Those fires of significance within the Battalion boundaries were concentrated in the Catheys Valley and White Rock areas. The largest of the three was a three hundred acre 'front county' fire started by a person smoking. The two fires in the Catheys Valley area although not large in acreage held the most potential for large and damaging fires. The fire prevention effort from Catheys Valley FFS and the great initial attack firefighting at the start of these fires are two reasons why they were contained at approximately 50 acres each.

This past year the VMP projects within the Battalion made steady progress however none of these projects were completed. The Adams VMP, an eight hundred acre prescribed burn in the Catheys Valley area was prepared for the burning, but, due to limited resources and air quality issues was not completed. This project is scheduled under contract to be competed in September 2003. The Hunters VMP is still in the planning stages and because of the "Hunter Fire" in 2000 has significant 'black line' in front of the identified area. This project has been scheduled for completion in September 2006. The number one priority VMP burn within the Battalion is the Greeley Hill VMP. This project is approximately 200 acres

And sits on a southwest facing slope between the communities of Coulterville and Greeley Hill. It is my opinion that the completion of this project is the first line of defense in keeping the community of Greeley Hill safe from wildfire. This project is located mostly on BLM ground and is "direct protection area" for the Coulterville FFS. In conjunction with the Greeley Hill VMP, the Mariposa/Greeley Hill Fire Safe council under guidance from BLM and CDF has proposed a fuel modification project around the privately owned structures that sit east of and along the ridge line adjacent to the VMP. If

the grant is approved this project will utilize private contractors to modify the fuel and support the efforts of the VMP.

This past year all three fire stations, Catheys Valley, Hornitos and Coulterville participated in an aggressive 4291 program. Each year I asked these stations to target certain area within their initial attack responsibility.

Hornitos elected to complete 100 percent of their inspections. Catheys Valley also targeted 100 percent of their initial attack area. Coulterville station targeted the Greeley Hill area and completed 50 percent of the target area.

Again, this past year in conjunction with the Unit's fire prevention staff we provided school programs in Catheys Valley, Coulterville and at the 'continuation school' in Hornitos. Station personnel will again provide that support in the up coming year.

Finally, I would like to address the Unit's Fire Plan. This will be the second year that this unit has not addressed or updated the unit's target areas. In the past, Battalion One's prevention plan has been prioritized around the unit's fire plan,. The direction and communication regarding this issue has made it difficult to build a document that will allow us to set a constructive and progressive course of action.



***(Priority #5)***

***Target Area #5 – Battalion 2***

**AREA DESCRIPTION:**

Target area #5 is in Battalion 2 and involves the Midpines area. The area has a history of significant wildfire and involves an area where firefighters have died as a result of extreme fire behavior. The fuel hazard ranking, timber values, housing density and the Stockton Creek Watershed, which provides drinking water for the community of Mariposa along with local knowledge of fire control difficulties all combine to justify the designation of this area #4.

**OBJECTIVES:**

- 1) Reduce wildfires in the Midpines area.
- 2) Protect the Stockton Creek Watershed

**PRESCRIPTIONS:**

The Battalion priority has been focused in the area of Target area 1, to complete the Ponderosa Basin fuel break. The projects in the Midpines area have been delayed pending available resources.

With the assistance of the Mariposa Fire Safe Council, the homeowners in the Davis Road area of Midpines have completed a fuel reduction project in their community.

The Von Der Ahe VMP project is located within the Stockton Creek Watershed, which originates in the Midpines area. This project will directly protect the town of Mariposa in the event of a wildfire occurring in the Stockton Creek drainage. A VMP contract has been entered with the Von Der Ahe Estate to remove dead fuels in the Stockton Creek drainage.

***(Priority #6)***

***Target Area #6 – Battalion 7***

**AREA DISCRIPTION:**

Target area # 6 is in Battalion 7 and involves an area west of Interstate 5, south of the city of Los Banos. This area has encounters significant fire history and continues to draw firefighting resources during fire events. The area experiences extreme fire weather often and fire starts remain numerous. The LOS, range and soil erosion potentials involve the criteria for choosing this area. The area is identified as an area that receives ignitions that result in large, fast moving fires.

**OBJECTIVES**

- 1) A. Confine roadside ignition area.
- 2) B. Reduce roadside fire ignitions.
- 3) C. Reduce fire size potentials.

**PRESCRIPTIONS**

- 1) A. Establish roadside vegetation reduction projects in strategic areas.  
B. Projects may include strip burning and disking of vegetation.  
B. Emphasis on area west of I-5 south of Canyon Road to Fresno County line.
- 2) A. Inventory the fire roads in the area and report on the conditions of them.  
B. Establish firebreaks in strategic areas in order to reduce fire sizes.  
C. Improve Laguna Seca Road from I-5 west to Langdon Canyon Road.  
D. Improve Paul Negro Road from I-5 west to Langdon Canyon Road.

***(Priority #7)***  
***Target Area #7 – Battalion 7***

**AREA DISCRIPTION:**

This target area is in Battalion 7 and involves the Hwy 152 area north of San Luis Reservoir. The area experiences similar factors as in the area of Target area #6 in that the area experiences frequent fires that are large, but not considered damaging. This area experiences daily traffic flow of 24,300 vehicles (Cal-Trans 1999 Traffic Census). The fires continue to draw firefighting resources from other areas during fire events. Soil erosion, scenic, LOS and range values are significant in this area.

**OBJECTIVES**

- 1) Confine roadside ignition fires.
- 2) Reduce roadside fire ignitions.

**PRESCRIPTIONS**

- 1) A. Establish roadside vegetation reduction projects.  
B. Conduct surveillance if needed.
- 2) A. Establish fire breaks in strategic areas.  
B. Inventory existing fire roads and report on their condition.  
C. Establish cooperative pre-fire projects with various land management agencies e.g.: State Parks and the wildlife refuges.

## ***Discussion***

The objectives and prescriptions identified in this section are general in direction. MMU staff will identify more specific prescription efforts throughout the course of this fire plan implementation. The battalion fire plans will expose actual efforts and activities performed on an annual basis. These plans will be attached to a pre-fire workload analysis, which records the costs of fire plan activities annually.

It has been determined that all schools in MMU's SRA will receive fire prevention education attention. This attention will be in the form of interpretive programs and material disbursement. This effort is included as a more detailed prescription within the target areas and will be recorded by fire prevention staff.

MMU continues to revere cooperative pre-fire management projects as valuable events. MMU staff will strive to increase the quantity and quality of interagency pre-fire management projects in order to improve the protection of shared risks.

Stakeholder cooperative fuel management projects continue to increase in frequency within MMU. (See Figure 11) MMU staff participation has been instrumental in these processes. MMU staff will continue to support these cooperative projects and provide as much technical support as is available.

The target area selection is essential to implementing the California Fire Plan and MMU Fire Plan. The results from the pre-fire management efforts within the target areas will include fuel breaks around communities, general area fuel reduction, a increased public awareness of the need for fire pre-fire management, increased community participation with pre-fire activities, and more successful initial attacks on fire. Not listed are the efforts, activities and awareness that are attracted to these communities resulting from collaborative efforts, the benefits "snowball" and increase the momentum of pre-fire management. It is a goal of MMU staff to utilize the MMU Fire Plan as a tool and guide to maintain the intensity of pre-fire management within MMU.

## VI. Stakeholder and Cooperative Fuel Management Projects

### SWIFT

“Cooperatively planning and implementing a strategic fire defense system designed to reduce the threat of loss to life, Property, and resources in the Southern Tuolumne & Northern Mariposa county urban-wildland interface”.

Over 11,062 acres of fuel treatment has been completed or is under contract to complete since the start-up of SWIFT in March of 1999. The South West Inter-Face Team has continued to identify the best wildland fire protection formula for the 132,000 acre project area.

#### PAST ACCOMPLISHMENTS

Fuel breaks Construction:	40.5 miles	
Mechanical Shredding:	5,985 acres	
Prescribed Burning:	5,063 acres	
Other Treatments:		
Animal Grazing		
Piling to Burn		
Hand Clearing		
Thinning/Other	1,857 acres	
TOTALS:	40.5 miles	12,905 acres

## **MARIPOSA COUNTY FIRE SAFE COUNCIL**

The efforts of the Mariposa Fire Safe Council, (MFSC) help get the word out to the homeowners of Mariposa communities on how to minimize the risk of fire in the Urban Interface. The MFSC has continued to focus on helping communities such as Midpines, Lush Meadows, Ponderosa Basin, Hunters Valley, and Greeley Hill with projects like clearing brush, chipping, doing free home inspections and educating the residents about fire safety.

As a Non-profit organization, the FSC is funded by grants. One such grant has been approved by the Mariposa County Board of Supervisors for Title III funds in the amount of \$80, 000 over the next two years. This grant will be used to conduct a community education and chipping project. Each month the FSC, a contracted crew and chipper, with dump truck will present a three-day fire safe education project in a different community. Weather permitting; they will be able to reach nine to ten communities each year allowing a re-visit the following year.

The Mariposa FSC also applied for and received a grant from the Sierra National Forest for \$96,000 to conduct a fuel reduction project around homes on SRA lands adjacent to SNF lands in the Mariposa Pines area. This project will enhance a fuel break project the SNF is working on to protect the community of Mariposa Pines.

One other grant has been approved for \$96,000.00 to complete phase two of a project in Greeley Hill, to provide a planning and education project adjacent to BLM lands within the area.

## **EASTERN MADERA COUNTY FIRE SAFE COUNCIL**

The Eastern Madera County Fire Safe Council (EMCFSC) has applied for and received several grants. One such grant from the National Fire Plan, for \$50,700 funds a chipping project in the North Fork area. The Madera County Board of Supervisors have approved Title II funds to purchase a chipper for this project and authorized the FSC to utilize the old North Fork Mill site to store and chip materials. A private contractor will transport the chips for use at a local biomass plant. Some of the material will be used to compost and given away to the public. Larger materials such as limbs and trunks will be used by the Economic Community Council to construct furniture and other items to help improve the local economy. This project is currently underway and is working well.

A grant for \$156,000 has been applied for and received through the Community Fire Assistance Program to expand fuel reduction projects in the North Fork, and the Oakhurst areas.

Another grant was applied for through BLM for \$138,500 to provide fire safe education, planning and coordination and implementation for the residents of Eastern Madera County. This grant has been approved.

The EMCFSC also administers three Title II and Title III grants for Madera County that provides funding for employment for at risk youths. The youths learn resource conservation practices, forestry, and provide fire safety services. The youths make up crews who work in the community and with the (EMCFSC) and the Coarsegold Resource Conservation District, doing fuel management projects, camp ground maintenance and assist senior citizens with fuel reduction needs in residential areas.

### **NORTH FORK MONO RANCHERIA**

The North Fork Mono Rancheria has received a grant in the amount of \$85,000 from BLM for an education and fuel reduction projects on tribal lands. This project is currently underway and a fuel reduction program has begun in and around the town of North Fork. The Rancheria also works with the (EMCFSC) to reduce fuels in other areas of North Fork.

## **VII. Institutional and Other Issues**

- 1). The loss of Mt. Bullion Camp has proved to be a considerable set back in accomplishing prefire projects. Grant funding requires a matching portion of the funds requested to be provided by the host agency. Without the use of a camp crew to offset the funding and work load, grants are not a method that can be utilized for funding for prefire projects at this time.
- 2). Again, the loss of the Unit forester has hampered the VMP program. We have been able to muddle through some basic VMP projects with the assistance of the Region forester's help, but now that that position has been eliminated the issues of VMP has become more difficult to accomplish.
- 3). The current spatial data being supplied for GIS projects needs to be validated and processed. The data in its present form is not accurate as it is received due to the wide range of data provided statewide.. The Pre Fire Engineer is working on validating this data with the assistance of a part time GIS Tech. With the introduction of a new GIS based dispatch system it is imperative the data be maintained in an accurate form. A position will need to be established to insure accuracy of data, provide maintenance and upkeep of this information.



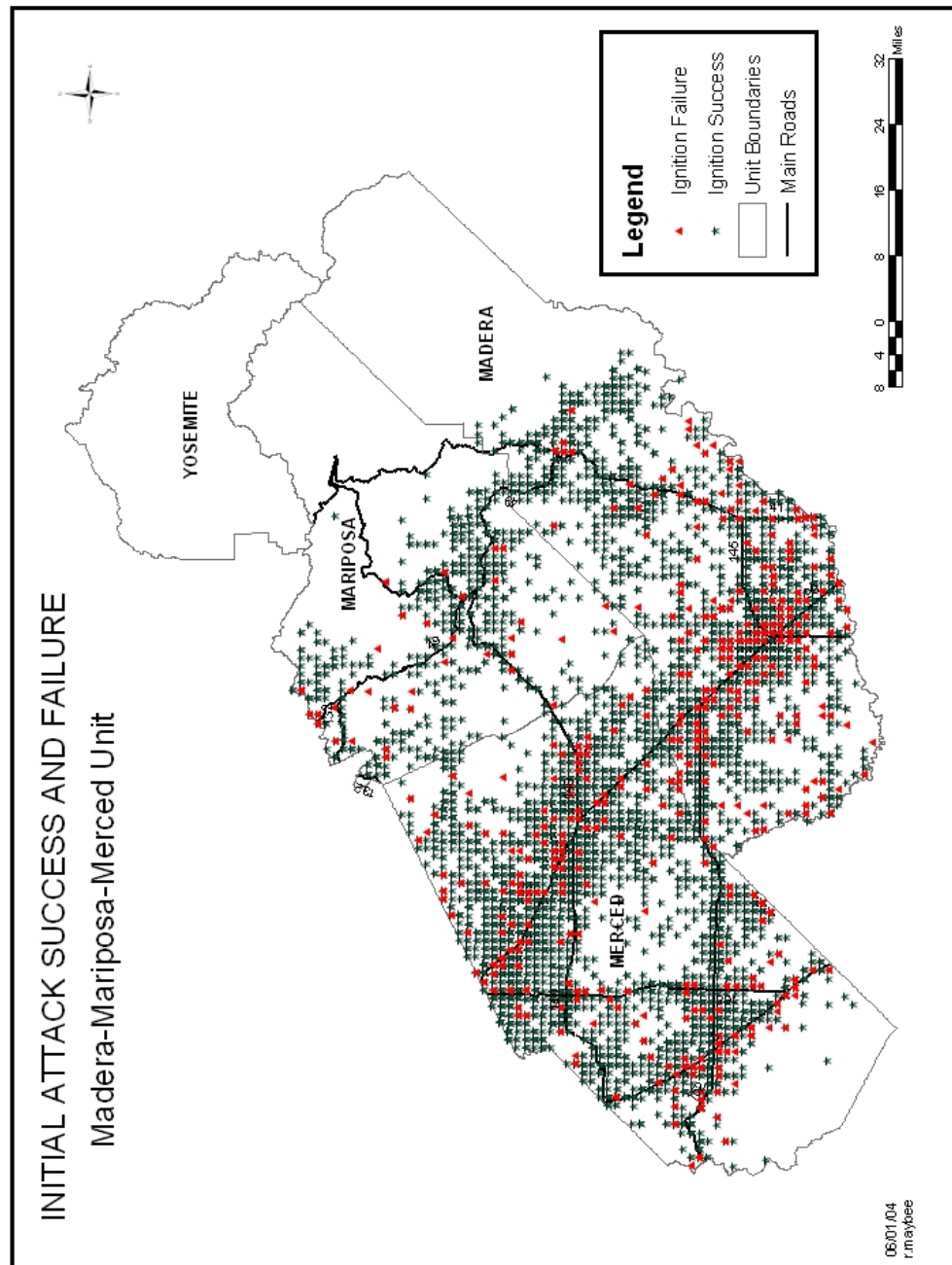
## **VIII. Appendix**

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## **STAKEHOLDERS LIST**

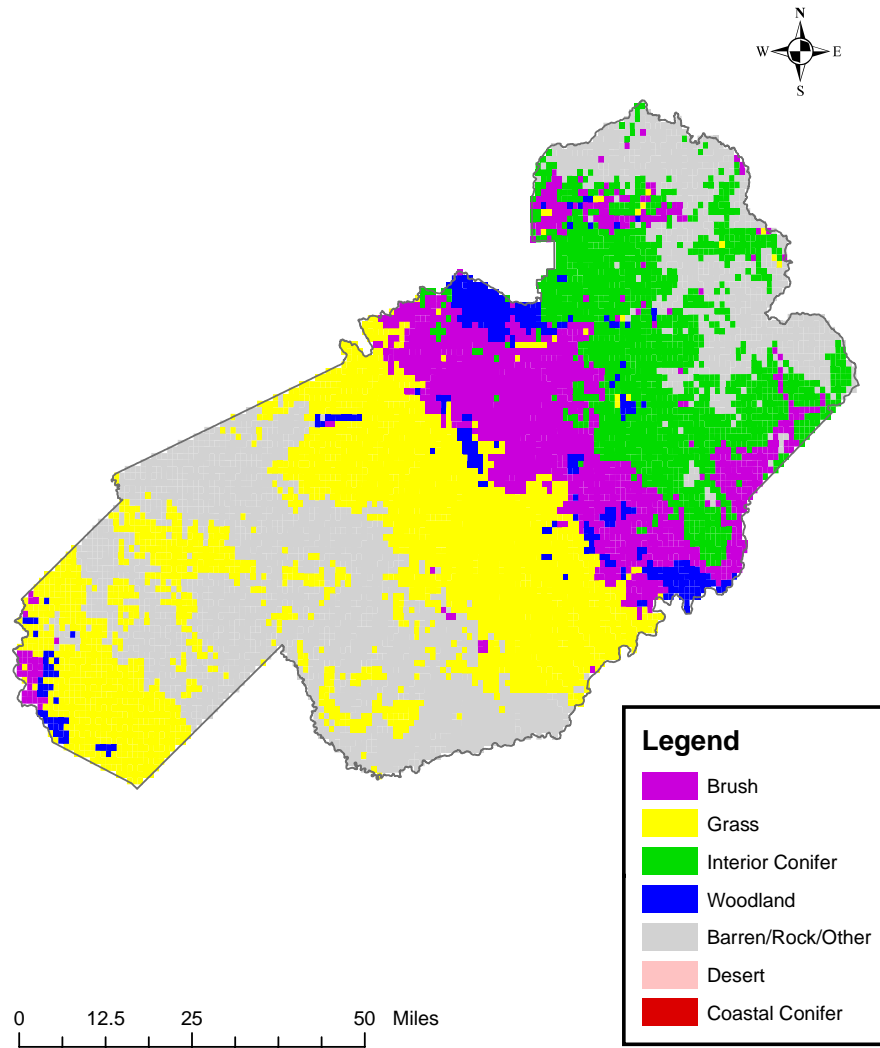
Residents of Madera, Mariposa and Merced Counties  
U.S. Forest Service, Sierra National Forest  
U.S. Forest Service, Stanislaus National Forest  
Bureau of Land Management, Folsom District  
National Resource Conservation Service  
Madera County Fire Department  
Merced County Fire Department  
Coarsegold Resource Conservation District  
Mariposa Resource Conservation District  
Madera County Road Department  
Madera County Environmental Health  
California Department of Fish and Game  
Pacific Gas and Electric  
Mariposa County Fire Safe Council  
Eastern Madera County Fire Safe Council  
North Fork Mono Rancheria  
Picayune Rancheria of the Chukchansi Indians  
The Ponderosa Acres Homeowner Group  
The Lushmeadows Homeowners Group  
Greeley Hill Fire Safe Group  
Mariposa County Fire Department  
Mariposa County Road Department  
Mariposa County Human Services Agency  
Mariposa County Office of Emergency Services  
Central Sierra Watershed Committee  
California Highway Patrol  
Oakhurst Action Council  
California Department of Transportation  
National Park Service  
Yosemite/Sequoia Resource, Conservation &  
Development Council





**Figure 2**

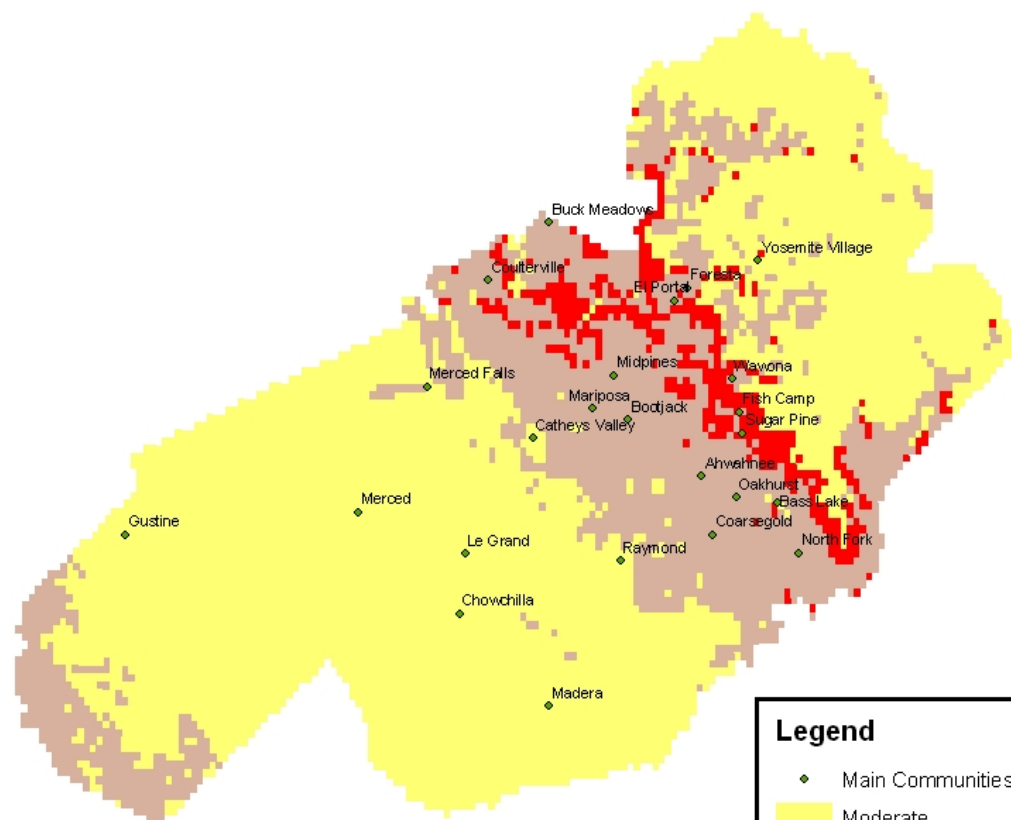
# MADERA-MARIPOSA-MERCED FUEL PLANNING BELT



7/03 RPM

**Figure 3**

## Madera-Mariposa-Merced Unit Fuel Ranking



### Legend

- ◆ Main Communities
- Moderate
- High
- Very High

0 15 30 60 Miles

05/15/04

**Figure 4**

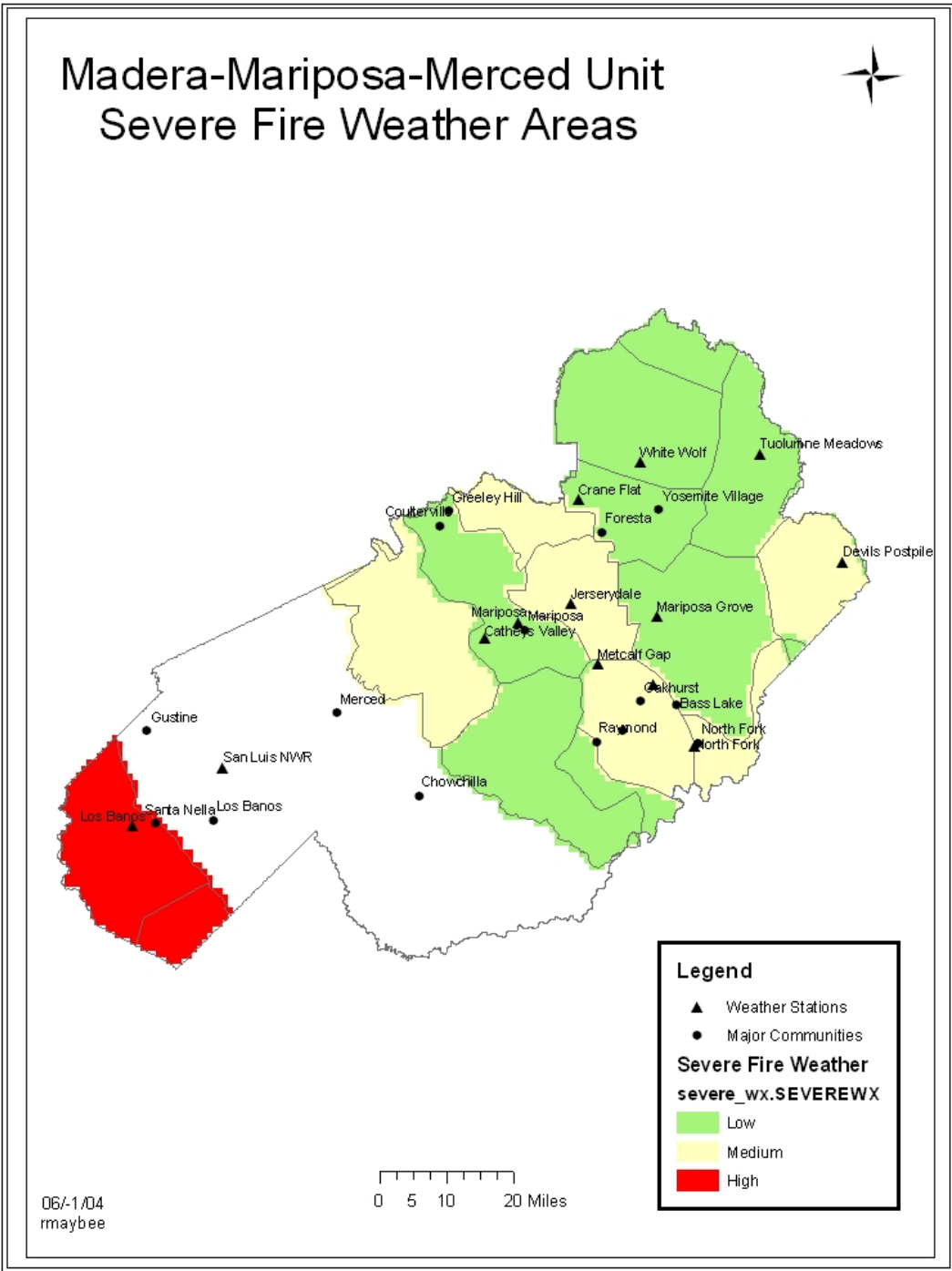
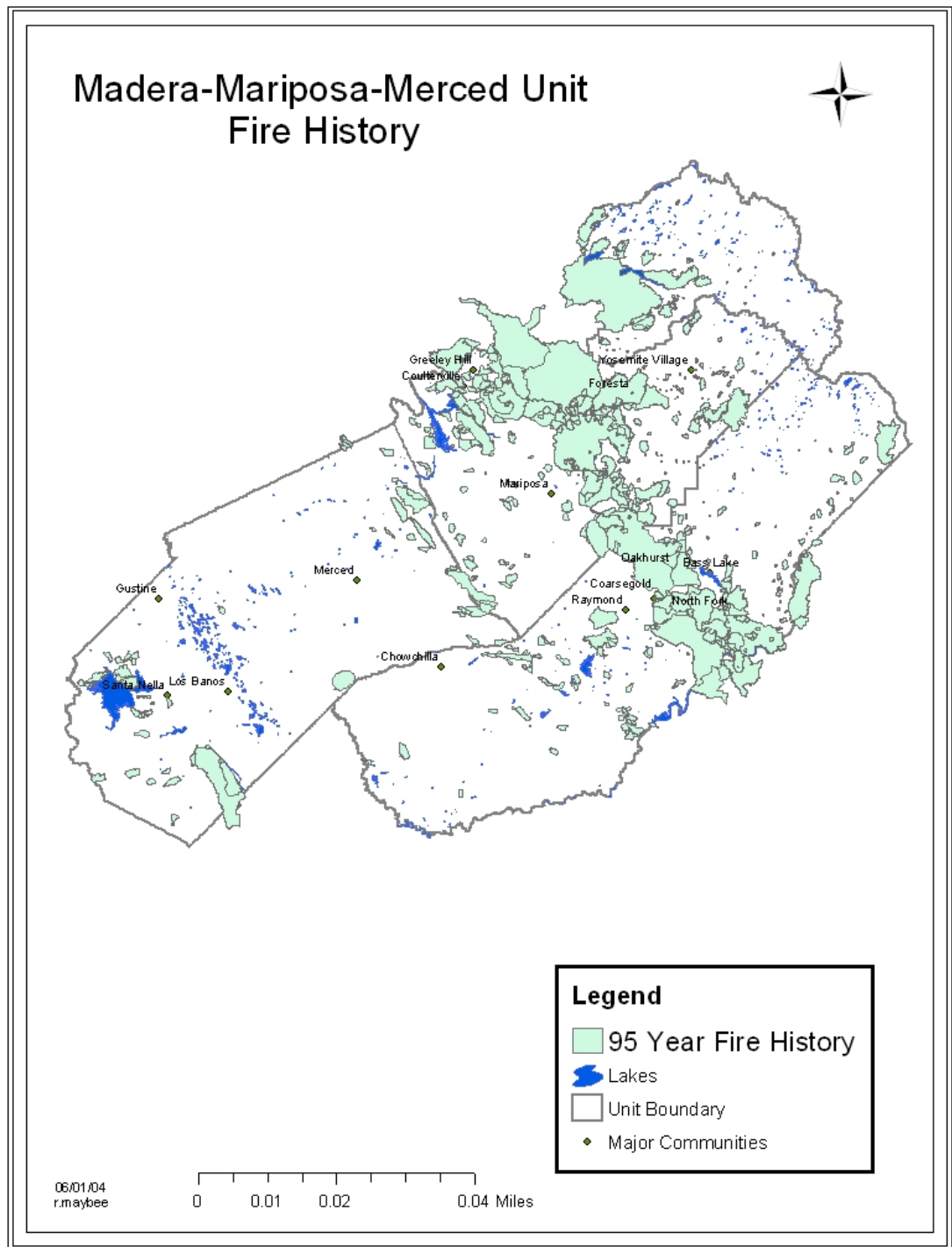
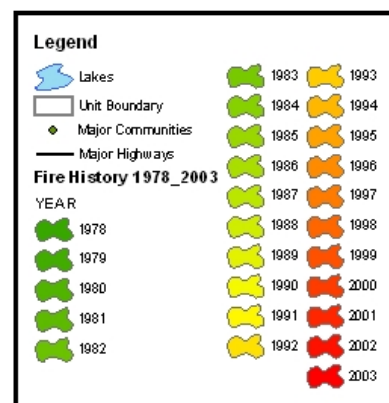


Figure 5



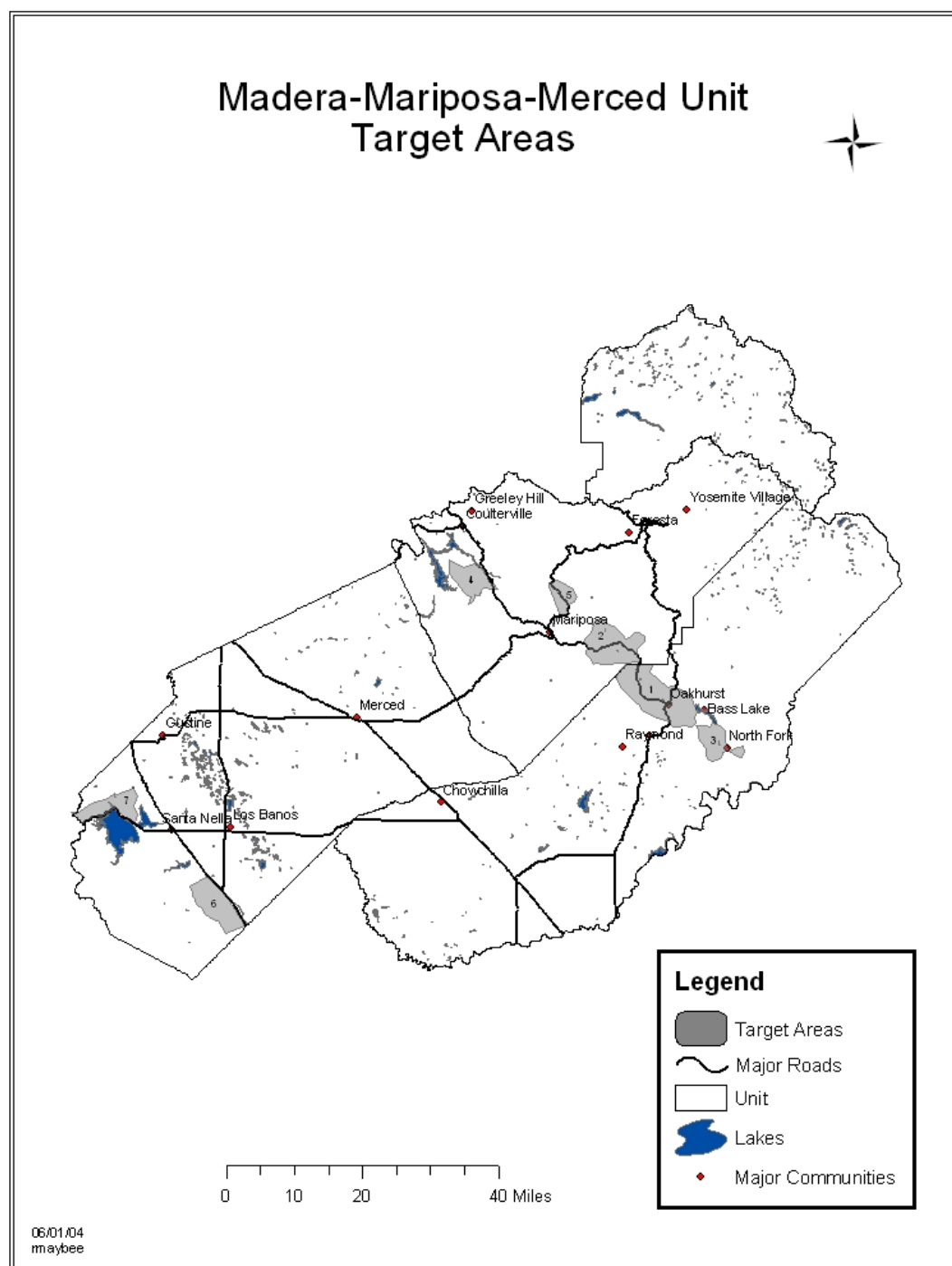
**Figure 6**





A horizontal number line with tick marks at 0, 0.01, 0.02, and 0.04 Miles.

58



**Figure 8**

